

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the
5 application:

Listing of Claims:

Claims 1-10 (canceled).

10 Claim 11 (Currently amended): ~~Use of a combination of recombinant domains derived from any one of the alpha, beta, gamma, delta and epsilon subunits of the primate muscle nicotinic acetylcholine receptor (AChR) in a method of immunoadsorption. A~~
method for removing anti-acetylcholine receptor (anti-AChR) antibodies from serum of a
15 myasthenia gravis (MG) patient, comprising the steps of:

i) contacting said serum of the MG patient with a combination of recombinant N-terminal extracellular domains of alpha, beta, gamma, delta and epsilon subunits of a
primate muscle nicotinic acetylcholine receptor (AChR); and

ii) immunoadsorbing anti-AChR antibodies from said serum.

20 Claim 12-13 (canceled).

Claim 14 (currently amended): The ~~use~~ method of claim 11 wherein the primate is human.

5 Claim 15 (currently amended): The ~~use~~ method of claim 11 wherein the recombinant domains are mutant forms of said domains.

10 Claim 16 (currently amended): The ~~use~~ method of claim 15 wherein the mutant forms include substitutions of free cysteine by other amino acids and substitutions of the hydrophobic loops of the subunits corresponding to alpha 128-142 by more hydrophilic sequences, or the alpha domain containing the P3A exon, or comprise a FLAG tag at the ~~N-terminal~~. N-terminal in the presence or absence of the 6His tag.

Claim 17 (canceled).

15 Claim 18 (currently amended): The ~~use~~ method of claim 11 wherein the recombinant N-terminal extracellular domain of the alpha subunit ~~is the N-terminal extracellular domain comprising~~ comprises amino acids 1-210.

20 Claim 19 (currently amended): The ~~use~~ method of claim 11 wherein the recombinant N-terminal extracellular domain of the beta subunit ~~is the N-terminal extracellular domain comprising~~ comprises amino acids 1-222.

Claim 20 (currently amended): The ~~use~~ method of claim 11 wherein the recombinant N-

terminal extracellular domain of the gamma subunit is ~~the N-terminal extracellular domain comprising~~ comprises amino acids 1-218.

5 Claim 21 (currently amended): The ~~use~~ method of claim 11 wherein the recombinant N-terminal extracellular domain of the delta subunit is ~~the N-terminal extracellular domain comprising~~ comprises amino acids 1-224.

10 Claim 22 (currently amended): The ~~use~~ method of claim 11 wherein the ~~recombinant N-terminal extracellular~~ domain of the epsilon subunit is ~~the N-terminal extracellular domain comprising~~ comprises amino acids 1-219.

Claim 23 (currently amended): The ~~use~~ method of claim 11 wherein the recombinant N-terminal extracellular domains are expressed in a eukaryotic expression system.

15 Claim 24 (currently amended): The ~~use~~ method of claim 23 wherein the eukaryotic expression system is ~~Pichia pastoris or SFV~~. selected from the group consisting of Pichia pastoris, Semliki Forest Virus, and combinations thereof.

20 Claim 25 (currently amended): The ~~use~~ method of claim 11 wherein the recombinant N-terminal extracellular domains ~~are~~ comprise large sequences of more than approximately 70 amino acids long ~~and, preferably, about 200 amino acids long.~~

Claim 26 (currently amended): The ~~use~~ method of claim 11 wherein the combination is

achieved simultaneously or sequentially.

Claim 27 (canceled).

- 5 Claim 28 (withdrawn): A carrier comprising a combination of recombinant domains of the primate muscle nicotinic AChR subunits alpha, beta, gamma, delta and epsilon.

10 Claim 29 (withdrawn): The carrier of claim 28 comprising a recombinant domain of the alpha subunit of the primate muscle nicotinic AChR in combination with a recombinant domain derived from any one of the beta, gamma, delta and epsilon subunits of the primate muscle nicotinic AChR.

Claim 30 (withdrawn): The carrier of claim 28 wherein the recombinant domains are covalently immobilized to the carrier matrix.

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Claim 31 (withdrawn): The carrier of claims 28 wherein the carrier has a mixture selected from agaroses, such as CNBr-Sepharose, celluloses, porous glass, silica, resins, synthetic matrixes including acrylamide derivatives, methacrylamide derivatives or polystyrene derivatives.

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Claim 32 (withdrawn): The carrier of claim 28 wherein the carrier is in the form of beads, fibrous form, sheets or hollow fibers, with spacer arms or without.

Claim 33 (withdrawn): A method for making a carrier for use in a method of immunoadsorption of anti-AChR antibodies comprising:

i) expressing a combination of recombinant domains of AChR subunits in a eukaryotic expression system;

5 ii) incubating said purified domains with an insoluble carrier matrix.

Claim 34 (withdrawn): The method of claim 33 wherein the combination of domains is coexpressed.

10 Claim 35 (withdrawn): The method of claim 33 wherein the eukaryotic expression system is *Pichia pastoris* or SFV.

Claim 36 (currently amended): A method of *ex vivo* removal of anti-AChR antibodies from the blood of MG patients comprising incubating said blood with a carrier 28
15 comprising a combination of recombinant N-terminal extracellular domains of the primate muscle nicotinic AChR subunits alpha, ~~beta~~, beta, gamma, delta, and epsilon.

Claim 37 (withdrawn): A recombinant domain of the beta subunit or gamma unit, or delta unit or epsilon unit of the primate muscle nicotinic AChR.

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Claim 38 (withdrawn): The recombinant domain of claim 37 wherein said domain of the beta unit is the N-terminal extracellular domain comprising amino acids 1-222.

Claim 39 (withdrawn): The recombinant domain of claim 37 wherein said domain of the gamma unit is the N-terminal extracellular domain comprising amino acids 1-218.

5 Claim 40 (withdrawn): The recombinant domain of claim 37 wherein said domain of the delta unit is the N-terminal extracellular domain comprising amino acids 1-224.

Claim 41 (withdrawn): The recombinant domain of claim 37 wherein said domain of the epsilon unit is the N-terminal extracellular domain comprising amino acids 1-219.

10 Claim 42 (new): The method of claim 25 wherein the recombinant N-terminal extracellular domains comprise about 200 amino acids.